



**King County**

Department of  
Natural Resources and Parks  
**Solid Waste Division**

# Earth Smart Adventures:

## Choices for Our Planet

### Introduction

The Earth Smart Adventures: Choices for Our Planet assembly introduces students to the idea that their choices have an impact on the environment. The assembly contains three key concepts: how advertising influences product choices, how those choices affect the environment, and how positive choices to reduce consumption and waste benefit the earth. The primary version focuses on waste reduction and recycling while the intermediate version introduces students to the concept of an ecological footprint.

The purpose of this discussion guide is to provide vocabulary, some interesting facts, and some activities that will provide background material for understanding the assembly or for building on the concepts introduced. Discussion questions and activities can be selected as appropriate for your students' level.

### Essential Learnings

The assembly deals with natural systems and cycles and environmental and resource issues. Students use listening and observation skills to gain understanding.



## Discussion Questions and Activities

Teachers may wish to introduce some of the concepts in this guide prior to the assembly so students can watch and understand what the characters in the show are learning. Earth Smart Actions are post-assembly activities.

## Discussion Questions and Activities

### Garbage

#### Discussion

- What is garbage? *Things we can't use or don't want anymore.*
- What sorts of things do we throw away? *Paper, packaging, food, junk mail, etc.*
- What are these things made from? *Natural resources such as paper from trees, plastic from oil, etc.*
- What happens to the garbage we throw away? *It ends up buried in a landfill and never can be used again.*

**Activity** – Divide a piece of paper into categories of paper, food, plastic, glass, metal, and other. Ask students to mark off how many items in each category that they (or their family) throw away for a day or a week. Compile all the data into one large chart. Compare the categories to see if they generally fit the typical pattern of the County's garbage. (The figures were based on weight, so results will vary.)

**Earth Smart Action** – Review what was thrown away and ways to reduce this amount. Were there items that could be reused or recycled? What are ways to rethink the garbage? Can students remember any ideas from the assembly? For example, using a sponge or a cloth towel instead of a paper towel or reusing a container instead of throwing it away.

#### Vocabulary:

garbage, waste, landfill

#### Did You Know?

- All of King County's garbage (excluding Seattle's) goes to the Cedar Hills Landfill.
- Cedar Hills receives over a million tons of garbage each year.
- Most of our garbage still is paper waste (23%) and food waste (20%). Other components include:
  - Plastic 11%
  - Metal 7%
  - Yard waste 5%
  - Glass 3%
- Food waste in one year is equal to two trillion quarter pounders!
- In King County, each family generates about 71 lbs of trash a week, 14 lbs (20%) of which is recycled and 26 lbs (36%) of which is yard waste.



### Litter

#### Discussion

- What is litter? *Litter is any trash, including food items and cigarette butts, that is improperly disposed.*
- What happens to the things we litter? *Litter ends up sitting on roadsides, on school grounds, or in parks until someone picks it up. Some litter harms wildlife.*
- Is it OK to litter things like apple cores? Why not? *Even food items that decompose should not be littered, since they attract animals to places or sources of food that are not natural.*

**Activity** – Set up several jars or plastic bottles with holes poked in the lids to let in air. Fill each jar 1/4 full with soil. Choose varied pieces of trash (paper, plastic, food) for your experiment. Add a piece of trash on top of the soil close to the side of the jar so you can observe what happens. Cover the garbage with more soil so the jar is half full. Add water to completely cover the soil, and put the lid on the jar. Observe the jars every other day and record your observations. At the end of a week, remove the piece of garbage from each jar. Compare the amount of decomposition: none, some, or a lot. Discuss what this tells us about what happens to litter.

**Earth Smart Action:** – Look at your school or a nearby park. Do you see any litter? If yes, figure out why and brainstorm ideas to prevent it in the future. Organize a litter clean-up. Did you know that people who pick up litter are less likely to litter in the future?

#### Vocabulary:

litter, decompose

#### Did You Know?

- Over 22 million tons of paper, plastic, wood and yard debris, and other materials are littered on Washington roadsides and in parks each year.
- Litter takes a long time to decompose:
  - Aluminum can: 100-500 years
  - Banana peel: 6 months
  - Cigarette filter: 15 years
  - Glass: never
  - Plastic: 50-400 years
  - Wax paper cup: 5 years
  - Styrofoam cup: 10-20 years
  - Chewing gum: 5 years
- Animals easily can become entangled or trapped in man-made products such as plastic, fishing line, cans, jars and bottles.
- Animals can mistake plastic items, balloons, and chewing gum for food, the ingestion of which results over time in lethal blockages and starvation.

## Discussion Questions and Activities

### Advertising

**Discussion** – Clip ads out of magazines and/or newspapers, especially of products relevant to kids. Discuss with students:

- Where do you see ads or commercials? *On TV and radio, in magazines and newspapers. Sometime logos on T-shirts and other products are a type of ad or brand.*
  - What do ads tell us? *They give you information about a product so you will buy it.*
  - What do you notice first when you look at this ad?
  - What product is this ad for?
  - What words in the ad make it sound good? *Delicious, nutritious for food, exciting, cool or fun for toys.*
  - What pictures in the ad make it look like a good product? *Person you admire, an activity you like to do.*
  - What questions should you ask before buying this product? Brainstorm some ideas that would help you decide whether you should buy the product or not. *Examples: How much does it cost? Do I need this? How long will it last?*

**Activity** – Have students keep track of the number of ads that they see in a half-hour TV program or in a favorite magazine. Ask the students to identify the product being advertised and whether they thought they wanted the product based on the advertisements.

**Earth Smart Action** – After the assembly, ask students to look at the same ads. What would the Waste-O-Meter say? More waste or less waste?

### Vocabulary:

advertisement, commercial

### Did You Know?

- Children spend approximately \$40 billion a year and exert influence in their family for purchasing additional household items totaling \$500 billion.
- Children as young as age three recognize brand logos (think Happy Meal).
- The average American child may view as many as 20,000 television commercials a year—about 55 commercials a day.
- Four hours of TV contain about 100 ads.

### Packaging

#### Discussion

- What is packaging for? *Provides safety, convenience, freshness, information about the product.*
- What things don't need a package? *School supplies, clothing, food that comes in a natural package, like a banana.*
- What's a serving size? *The amount of food per person.*
- Who decides what a serving size is? *Whoever makes the product.*
- Should it be the same for everyone? *No, some people need or want more or less depending on their size or hunger.*

**Activity** – Collect packaging from student lunches and snacks over a day. If you are concerned about students teasing each other, trade packages with another teacher. Break the students into groups and have them sort the packages, answering the following questions:

- What was the purpose of the package?
- Did the product need all that packaging?
- How should you dispose of the package? Garbage, recycle, reuse?
- What natural resources were used to make the package?

**Earth Smart Action** – Is there a way you could have the same food and use less packaging? Write letters to companies that use too much packaging for their products.

**Vocabulary:** packaging, serving size, individually packaged, natural resources

### Did You Know?

- About a third of the waste generated in the United States is packaging.
- An additional 4 million tons of wrapping paper and shopping bags are used during the holiday season.
- Individually packaged products are convenient, but don't allow choice in serving size, which frequently results in wasting the package and the product inside the package.
- Packaging uses natural resources such as trees for paper and oil for plastic.
- If everyone in Washington State reused a plastic bag once, that would save over 6 million bags from the landfill.

## Discussion Questions and Activities

### Earth Footprint

#### Discussion

- What are some natural resources that we use everyday? *Water, trees for paper, water for electricity, oil for the car and bus, oil for plastic, plants and animals for food.*
- Does everyone use the same amount? What are some of the choices we make that affect the number of resources we use? *The things we buy, how much water we use when taking a shower or brushing our teeth, how far we need to drive to get to school, etc.*
- What is an Earth or Ecological Footprint? *It's a visual demonstration of the impact our choices have on the planet. The more resources we use, the bigger our footprint.*
- What are some ways we can reduce the size of our footprint or lessen the impact we have on the earth? *Follow the four Rs: reduce, reuse, recycle, and rethink. Turn off lights, the TV, and other appliances when not needed. Take shorter showers. Use reusable containers to store leftovers.*

**Activity** – Brainstorm a list of the different choices students make in a day that use natural resources. Examples might be what they chose for breakfast, packed for lunch, how they got to school, whether they took a shower. Make a chart with two headings: more wasteful and less wasteful. Ask students to identify more wasteful and less wasteful ways to make those same choices. Discuss why you might pick one choice over another. For example, you need to ride the bus because you live too far to walk. What other factors go into their decision? Safety, parent concern, time, convenience? What are some choices they can make to be less wasteful that would be easy to do? Take a shorter shower? Use a reusable container for a snack? Watch less TV?

**Earth Smart Action** – Look at the list of choices that were less wasteful. Ask students to pick one action and try it for a week. At the end of the week, reflect on how easy or hard it was to do.

#### Did You Know?

- Approximately 3.4 million tons of printing and writing paper are purchased each year during the back-to-school season. Every ton of 100% post-consumer recycled paper saves 24 trees and 4100 kilowatt hours of electricity.
- The average person in the U.S. uses about 750 pounds of paper a year. That means together three people use more than a ton. For every ton of paper recycled, 2.5 tons of carbon dioxide is prevented from forming. This helps our climate.
- The amount of electricity that goes into producing one ton of paper would power your house for two months.
- The average American uses 170 gallons of water a day.
- Keeping your shower to five minutes or less will save 75 gallons of water a week per person.
- Throwing away one aluminum can wastes as much energy used to power a TV for three hours.
- The amount of plastic wrap thrown away each year could wrap around the earth 25 times.

### Websites/Resources

Green Team Specialists are available to help your classroom with environmental stewardship projects. They can give you ideas or help you with your own. Classrooms that conduct projects will receive recognition in the Class Act newsletter and are eligible to receive water bottles made from recycled plastic. Contact **206-583-0655**, ext 13 or [greenteam@triangleassociates.com](mailto:greenteam@triangleassociates.com) to arrange a consultation or classroom visit or to report on your project.

Activity sheets and lesson plans on reducing, reusing, recycling, and setting up a worm bin are available on King County's website at [www.metrokc.gov/dnrp/swd/elementaryschool](http://www.metrokc.gov/dnrp/swd/elementaryschool).

For a good source of facts and information on how to reduce your consumption levels without going crazy, visit [www.ibuydifferent.org](http://www.ibuydifferent.org).

For simple steps to discussing advertising with children and what to do if you think an ad is inaccurate or inappropriate for children under 12, visit [www.caru.org/guidelines/parent](http://www.caru.org/guidelines/parent).



**King County**  
Department of  
Natural Resources and Parks  
**Solid Waste Division**  
TTY Relay: 711

This notice will be provided in  
alternate formats upon request.



Printed on recycled paper August 05

